

NOTULAE AD FLORAM AGARICINAM NEERLANDICAM—X—XI ENTOLOMA

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X. NOMENCLATURAL NOTES ON SPECIFIC NAMES USED IN THE FLORA

While I was preparing the manuscript of *Entoloma* for the Flora agaricina neerlandica Thomas Kuyper drew my attention to nomenclatural complications concerning some of the specific names used. Accordingly some nomenclatural changes and corrections are proposed here, partly induced by the recent changes in the International Code of Botanical Nomenclature ('Sydney-Code', 1983).

lividum.—*Entoloma eulividum* Noordel., *spec. nov.*

Misapplied names.—*Entoloma lividum* (Bull.→) Quél. sensu Quél., auct. eur. p.p. non Bull.

Entoloma sinuatum (Bull. ex Pers.: Fr.) Kumm. sensu auct. eur. p.p. (e.g. Dennis, Orton & Hora, 1960; Moser, 1983) non Bull.; Romagnesi (1978); Noordeloos (1981).

Basidiomata robusta; pileus usque ad 210 mm latus, haud hygrophanus, haud translucido-striatus, pallide griseo-brunneus vel griseo-ochraceus vel dilute luteus, glaber vel radialiter innato-fibrilosus, margine interdum leviter rimosus; lamellae confertae, adnatae vel emarginatae, segmentiformes vel ventricosae, flavidae vel ochraceae demum salmonae; stipes 40–150 × 5–35 mm, cylindraceus, versus basim attenuatus vel incrassatus, albidus, grosse longitudinaliter fibrillosus; caro alba, firma; odor graveolens-acidulus, farinaceus vel rancidus. Sporae 8–10.5(–11.5) × 7–9.5 µm, Q = 1.0–1.3, hexa-angulatae; basidia tetrasporigera; acies lamellarum fertilis; cystidia nulla; pileipellis ixocutis hyphis cylindraceis 2–5 µm latis pigmentis intracellulosis; fibulae numerosae. Ad terram argillaceam calcaream in silvis frondosis.—Holotypus: C. Bas 6618, 9-IX-1975, 'Le Roptai, Ave-et-Auffe, prov. Namur, Belgium' (L).

Although widely used the name *Entoloma lividum* (Bull. →) Quél. cannot be maintained for this well-known and, because of its toxicity, important species. *Agaricus lividus* Bull. is typified by Bulliard's plate which clearly depicts *Pluteus atricapillus* (Batsch) Fayod (syn. *P. cervinus*). Furthermore Bulliard's name is a later homonym of *Agaricus lividus* Huds. 1778. It is not quite clear how Quélet (1872, 1886) could misunderstand Bulliard's concept of the species so badly when he started to use the epithet *lividum* for the well-known large *Entoloma* with yellow lamellae.

Many authors consider *E. sinuatum* (Bull. ex Pers.: Fr.) Quél. as being identical with *E. lividum* sensu Quél., but Romagnesi (1978) and Noordeloos (1981) made clear that here another species, characterised by a different colour of pileus and lamellae, is involved. The striking yellow colour of the lamellae of *E. lividum* sensu Quél., however, was first mentioned by Quélet (1872), and later on generally accepted as the most important diagnostic character of the species. As no other name has been found

for *E. lividum* sensu Quél., I decided to describe this taxon as a new species. To 'conserve' the widely known name *lividum*, the epithet *eulividum* was chosen.

Some older taxa which come close to *Entoloma eulividum* are *Agaricus fertilis* Pers. (which is the same as *A. fertilis* 'Berk.' in Dennis, Orton & Hora, 1960) and *A. sublividus* Britz. Both taxa differ in the lack of yellow colours in the lamellae, besides *A. fertilis* is said to be hygrophanous and *A. sublividus* has a totally different colour of the pileus. Two more recently described species of *Entoloma* with yellow lamellae are *E. flavifolium* Peck and *E. luridum* Hesl. They differ, however, in habit and spores (*E. flavifolium*) or in having a hygrophanous, translucently striate pileus and smaller spores (*E. luridum*).

bloxamii. — *Entoloma bloxamii* (B. & Br.) Sacc., Syll. Fung. 5: 648. 1887.

Misapplied name. — *Agaricus madidus* Fr. (nom. superfl. for *Agaricus globosus* Schum.).

Fries (1836) introduced *Agaricus madidus* as a new species referring to *A. 'subglobosus'* Schum. and Fl. dan., tab. 2148. Obviously Fries erroneously used the epithet *subglobosus*, and *A. globosus* Schum., Enum. plant. Sælandiae sept. orient. 2: 296. 1803 stands for the species concerned. According to the present nomenclatural rules *A. madidus* Fr. must be considered a nomen superfluum for *A. globosus* Schum. and consequently be typified with the type of the latter species.

Now the question arises whether *A. globosus* Schum. is identical with the fungus Fries had in mind, which is the same as what we generally consider *Entoloma madidum* (Fr.) Gill.

Schumacher (1803) described *A. globosus* as follows: '...solitarius, pileo carnoso hemispherico conico umbonato laevi fuscoviolaceo; lamellis carne sublatioribus violaceis; stipite sublongo deorsum subincrassato coeruleo, basi radiciformi tenui albo incurvo. Inter folia dejecta faginea (Bagsvaerd). Octob. Caro violacea. Pileus haud ultra 0.5 poll. latus & altus. Stipes sub 2 poll. longus, superne 1.5 lin. inferne 3 lin. crassus.'

It is quite clear from this description that on account of the violaceous lamellae and the habitat in *Fagus* forest, *Agaricus globosus* Schum. does not agree with the current concept of *E. madidum*. The illustration of *A. globosus* in Fl. dan., tab. 2148 (1832), gives a fungus with an almost mycenoid habit. The violaceous lamellae also exclude the possibility that *A. globosus* has anything to do with the fungus we call nowadays *E. nitidum* (= *A. ardosiacus* Bull. sensu Fr.), which has pale pink lamellae.

Fries (1821: 202; 1838: 148) considered *Agaricus purpureus* Bolt., Hist. Fung. Halifax, pl. 41B (1788) as identical with *A. globosus*. It is probable that both Schumacher and Bolton depicted a fungus identical with *Mycena pura* (Pers.: Fr.) Kumm. or a species of *Cortinarius*. However, it is clear that *Agaricus globosus* Schum. does not represent *Entoloma madidum* sensu auct., and therefore the name *Entoloma bloxamii* (B. & Br.) Sacc. must be used for that species.

niphoides.—*Entoloma niphoides* Romagn. ex Noordel., *spec. nov.*

Rhodophylus niphoides Romagn. in Bull. trimest. Soc. mycol. Fr. 63: 198. 1947 (nom. nud., no latin diagnosis).

Misapplied name.—*Entoloma speculum* (Fr.) Quél. sensu Cooke, III. Brit. Fungi 3, pl. 342 (308). 1884.

Basidiomata alba. Pileus 20–145 mm latus, convexus demum planus, umbonatus, leviter hygrophanus, ad marginem translucido-striatus, glaber; lamellae moderate distantes, adnatae vel emarginatae, segmentiformes vel ventricosae, albidae demum roseae; stipes 45–80 × 4–15 mm, cylindraceus interdum versus basim incrassatus, glaber, leviter striatus; caro subfirma, alba; odore saporeque farinaceis. Sporae 8–10(–11–5) × 7.5–9.5(–11) μm , subisodiametrae, angulatae; basidia tetrasporigera; acies lamellarum fertilis; cystidia nulla; pileipellis ixocutis hyphis cylindraceis 4–6 μm latis pigmentis nullis; fibulae presentes. Ad terram in vicinitate *Prunarum spinosarum*, vernalis. —Holotypus: M. E. Noordeloos 159, 2-VI-1976, 'camp-site de Roos, Beerse, prov. Overijssel, the Netherlands' (L).

For a full description, illustrations and literature references see Noordeloos (1981).

saepius.—*Entoloma saepium* (Noul. & Dass.) Richon & Roze, Fl. Champ. com vén.: 92. 1880 (as *E. sepium*).

Noulet & Dassier (1838) published a new vernal *Entoloma* under the name *Agaricus saepius* (agaric with sepiaceous colour). Richon & Roze (l.c.) 'corrected' this into *Entoloma sepium*, which means *Entoloma* of the hedges which is an appropriate name but an illegitimate name-change. The latter name, however, is widely used thereafter, also in my monographic treatment of *Entoloma* subg. *Entoloma* (Noordeloos, 1981). In the Flora agaricina neerlandica, however, I go back to the original spelling and meaning of the specific epithet for this vernal *Entoloma*.

cuspidiferum.—*Entoloma cuspidiferum* (Kühn. & Romagn.) ex Noordel. in Persoonia 10: 461. 1980 (as *E. 'cuspidifer'* comb. nov.)

When I made the new combination *Entoloma cuspidifer* I was not aware of the fact that *Rhodophyllus cuspidifer* Kühn. & Romagn. had not been published validly according to the International Code of Botanical Nomenclature (art. 33.2) because the publication date was lacking in the citation of the basionym. Therefore my so-called new combination cited above must be considered to include an unintentional validation of *Entoloma cuspidiferum* as a new name for *Rhodophyllus cuspidatus* (Fr.) Favre 1948 non *R. cuspidatus* Pat. 1924 nec *Entoloma cuspidatum* (Peck 1870) Sacc. 1887.

pleopodium.—*Entoloma pleopodium* (Bull. ex DC.: Fr.) Noordel., *comb. nov.*

Basionym: *Agaricus pleopodius* Bull. ex DC. in Lamarck & DC., Fl. franc. 2: 194. 1805.

Synonym.—*Agaricus icterinus* Fr.: Fr., Syst. mycol. 1: 207. 1821.

In my revision of *Entoloma* subg. *Nolanea* (Noordeloos, 1980) I argued that *Agaricus pleopodius* Bull. ex DC. and *A. icterinus* Fr. must be considered synonyms. Accord-

ing to the recent International Code of Botanical Nomenclature ('Sydney-Code') *A. pleopodius* must be considered the oldest name available, and therefore the combination *Entoloma pleopodium* is used here instead of *E. icterinum*.

elodes.—*Entoloma elodes* (Fr.: Fr.) Kumm., Führ. Pilzk.: 98. 1871.

The original spelling by Fries (1821) is *elodes*, and this may not be 'corrected' into *helodes*.

XI. NEW TAXA, NAMES, AND COMBINATIONS.

While preparing the manuscript on *Entoloma* for the Flora agaricina neerlandica and simultaneously a monograph of subgen. *Leptonia*, some new taxa were discovered, which are formally described here. Full descriptions and illustrations will be published in the two works mentioned. In addition some new combinations and one new name are introduced.

Entoloma poliopus (Romagn.) Noordel. var. *parvisporigerum* Noordel., *var. nov.*

A varietate typica differt in sporis minoribus, 8–11 × 6–8 µm.—Holotypus: *P. B. Jansen 81.178*, 25-VII-1981, 'Staverden, Loam-pits, Ermelo, prov. Gelderland, The Netherlands (L).

Entoloma poliopus (Romagn.) Noordel. var. *discolor* Noordel., *var. nov.*

A varietate typica differt in acie lamellarum concolora, cheilocystidiis brevibus et stipite ardesiaco.—Holotypus: *M. E. Noordeloos 1441*, 6-IX-1981, 'Standing stone, Kirkmichael, Perthshire, Scotland' (L).

Entoloma allospermum Noordel., *spec. nov.*

Pileus 7–20 mm latus, convexus demum applanatus, papillatus, haud hygrophanus, haud translucido-striatus, pallide vel obscure grisobrunneus, granuloso-subsquamulosus; lamellae adnatae vel adnexae, sordide roseae; stipes 27–50 × 2 mm, ardosiacus; odore saporeque farinaceis. Sporae 7–10 × 7–8 µm, subisodiametrae, obtuse angulatae; basidia tetrasporigera; acies lamellarum fertilis; cystidia nulla; pileipellis trichoderma elementis inflatis 6–17 µm latis pigmentis intracellulosis; fibulae absentes. Ad terram inter gramines in silvis betularum subalpinis.—Holotypus: *M. E. Noordeloos 8360*, 22-IX-1983, 'Struan Birchwood near Blair Atholl, Perthshire, Scotland' (L).

Entoloma glaucobasis [Huijsman] ex Noordel., *spec. nov.*

Pileus 10–27 mm latus, convexus vel conicus, papillatus vel applanatus raro umbilicatus, sordide brunneus, translucido-striatus, fibrillosus vel subsquamulosus; lamellae adnexae vel leviter adnatae, albidae demum roseae; stipes 25–45 × 1–2 mm, bicolor, in parte superiore sordide brunneus in parte inferiore caeruleo-glaucus, politus; odore saporeque nullis. Sporae (9–)10–13.5 × 7.5–9 µm, pluri-angulatae; basidia tetrasporigera; acies lamellarum sterilis; cheilocystidia clavata vel vesiculosa, 20–50 × (8–)12–22 µm; pileipellis cutis ad marginem, trichoderma in centro elementis inflatis 15–35 µm latis pigmentis intracellulosis. In graminosis subalpinis.—Holotypus: *G. Wölfel 27/84*, 18-VIII-1984, 'Trudenbach, Naturpark Trudnerhorn, W. Germany' (L).

Entoloma caeruleoflocculosum Noordel., *spec. nov.*

Pileus 7–18 mm, convexo-umbilicatus, haud hygrophanus, haud translucido-striatus, obscure brunneus, toto squamulosus; lamellae late-adnatae, sordide incarnatae; stipes 20–40 × 1.5–3 mm, cylindraceus, obscure caeruleo-flocculosus; odore saporeque nullis. Sporae 9–13.5 × 6.5–9 μ m, 5–7-angulatae; basidia tetrasporigera; acies lamellarum sterilis cheilocystidiis clavatis 7–12 μ m latis; pileipellis cutis vel trichoderma elementis inflatis 10–22 μ m latis pigmentis intracellulosis; fibulæ absentes. In graminosis.—Holotypus: *M. E. Noordeloos 8362, 22-IX-1983, 'Struan Birchwood, Blair Atholl, Perthshire, Scotland'* (L).

Entoloma sarcitulum (P. D. Orton) Arnolds var. *microsporum* Noordel., *var. nov.*

A varietate typica differt in sporis minoribus, 7.5–10.5 × 6.5–9 μ m.—Holotypus: *C. Bas 7667, 13-IX-1980, 'Quackjeswater, Rockanje, Isl. Voorne, prov. Zuid-Holland, The Netherlands'* (L).

Entoloma olivaceotinctum Noordel., *spec. nov.*

Pileus 5–20 mm latus, convexus, leviter depresso, paule hygrophanus, translucido-striatus, centro obscure brunneo-olivaceo, margine pallidior, centro squamuloso, margine glabro; lamellae distantes, adnatae, albae demum roseae; stipes 12–25 × 1–1.5 mm, cylindraceus, luteolo-olivaceus, fibrilloso-striatus; odore saporeque nullis. Sporae 7–9 × 6–7-angulatae; basidia tetrasporigera; acies lamellarum sterilis cheilocystidiis clavatis 18–40 × 6–10 μ m; pileipellis trichoderma elementis inflatis ad 15 μ m latis pigmentis intracellulosis; fibulæ presentes in hymenio. In graminosis.—*Jukka Vauras 1552F*, 9-VIII-1983, 'Antikkala, Puijo, Kuopio, Savonia borealis, Finland' (L).

Entoloma sect. Cephalotricha Noordel., *sect. nov.*

Basidiomata statura *Alboleptoniae*. Pilcipellis cutis hyphis cylindriaceis elementis terminalibus capitatis; fibulæ nullæ.—Holotypus: *E. cephalotrichum* (P. D. Orton) Noordel.

Entoloma exile var. *pyrospilum* (P. D. Orton) Noordel., *comb. & stat. nov.* — Basionym: *Leptonia pyrospila* P. D. Orton in Trans. Br. mycol. Soc. 43: 298. 1960.

Entoloma formosum (Fr.: Fr.) Noordel., *comb. nov.* — Basionym: *Agaricus formosus* Fr.: Fr., Syst. mycol. 1: 208. 1821.

Entoloma incarnatofuscescens (Britz.) Noordel., *comb. nov.* — Basionym: *Agaricus incarnatofuscescens* Britz., Hymenomyc. Südbayern 8: 6. 1894 ('1891').

Entoloma kuehnerianum Noordel., *nom. nov.* — Basionym: *Rhodophyllus mammosus* var. *sericoides* Kühner in Kühn. & Romagn. in Rev. Mycol. 19: 10. 1954 non *Entoloma sericeoides* (J. Lange) Noordel. 1980.

Entoloma myrmecophilum forma *atrogaleatum* (Noordel.) Noordel. *stat. nov.* — Basionym: *Entoloma myrmecophilum* var. *atrogaleatum* Noordel. in Persoonia 11: 198. 1981.

Entoloma phaeocyathus Noordel., *nom. nov.* — Basionym: *Eccilia triste* Bres. in Sacc., Syll. Fung. 9: 89. 1891 non *Entoloma triste* (Velen.) Noordel. 1979.

Entoloma plebeioides (S. Schulz.) Noordel., *comb. nov.* — Basionym: *Agaricus plebeioides* S. Schulz. in Verh. zool. bot. Ges. Wien 26: 428. 1876.

Entoloma plebejum (Kalchbr.) Noordel., *comb. nov.* — Basionym: *Agaricus plebejus* Kalchbr., Ic. sel. Hymenomyc. Hungariae: 22. 1874.

Entoloma rufocarneum (Berk.) Noordel., *comb. nov.* — Basionym: *Agaricus rufocarneus* Berk., Engl. Fl.: 82. 1836.

Entoloma sarcitulum var. *majusculum* (Kühn. & Romagn.) Noordel., *comb. & stat. nov.* — Basionym: *Rhodophyllus majusculus* Kühn. & Romagn. in Rev. Mycol. 19: 6. 1954 (Compl. FL. anal. 1).

Entoloma scabrosum (Fr.) Noordel., *comb. nov.* — Basionym: *Agaricus scabrosus* Fr., Epicr.: 1954. 1838.

Entoloma xanthochroum (P. D. Orton) Noordel., *comb. nov.* — Basionym: *Leptonia xanthochroa* P. D. Orton in Not. roy. bot. Gdn Edinb. 26: 54. 1964.

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